

Title (en)  
RHODIUM-PHOSPHINE COMPLEX CATALYST

Publication  
**EP 0156607 A3 19860115 (EN)**

Application  
**EP 85301846 A 19850315**

Priority  
JP 5360084 A 19840322

Abstract (en)  
[origin: EP0156607A2] A rhodium-phosphine complex is represented by the formula:  $[Rh(p\text{-Tolyl BINAP})_2]Y$  wherein p-Tolyl BINAP represents 2,2'-bis(di-p-tolylphosphino)-1,1'-binaphthyl, and Y represents C104, PF6, BF4 or PCl6. The complex is prepared by reacting in a solvent the p-Tolyl BINAP with a rhodium complex of formula:  $[Rh(olefin)(p\text{-Tolyl BINAP})]Y$  optionally with hydrogenation of the mixed solution. Methods are described for preparing these reagents. The complex is useful as a highly active catalyst in industrial reactions, e.g. synthesis under pressure for several hours of citronella or of a derivative thereof, especially for asymmetric hydrogenation or dehydrogenation.

IPC 1-7  
**C07F 15/00**; **B01J 31/24**

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CPC (source: EP US)  
**C07C 45/516** (2013.01 - EP US); **C07C 209/68** (2013.01 - EP US); **C07F 15/008** (2013.01 - EP US)

Citation (search report)  
[A] JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol. 102, no. 27, 1980, pages 7932-7934, Washington, DC, US; A. MIYASHITA et al.: "Synthesis of 2,2'-Bis(diphenylphosphino)-1,1'-binaphthyl (BINAP), an atropisomeric chiral Bis(triaryl)phosphine, and its use in the rhodium(I)-catalyzed asymmetric hydrogenation of alpha-(acylamino)acrylic acids"

Cited by  
US7223879B2; US6946560B2; US7026498B2; US7247731B2; US7560582B2; EP0170470A3; EP1142859A3; EP0235450A1; EP0544455A1; EP0403188A3; EP0257411A3; US4861890A; US6020527A; EP0949241A3; US6350910B1

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